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ABSTRACT

An Electronic device including Asynchronous Transfer Mode (ATM) switching capabilities or including interior fixed length packet/cell processing for use in telecommunication networks. The electronic device includes a buffer of incoming cells of packets, the cells are assigned, each, within Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI), such that all cells of the same packet bear the same VCI. Each VCI is associated with data that include data item serving for packet efficiency mechanism. The device further includes storage medium storing data representative of data structure for storing selected number from the specified data items. The device further includes processor associated with the storage medium that is configured to perform the processing procedures that include: for each incoming cell whose VCI is associated with data item that is stored in the data structure constructing a search key that enables to access said data item at substantially $O(1)$.

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